

STEREOSCOPIC DISPLAY SYSTEM AND METHOD**ABSTRACT OF THE DISCLOSURE**

A liquid crystal display (LCD) has an electro-mechanical structure over the surface of the display that enables the light from individual picture elements (pixels) to be directed by X and Y control signals. The electro-mechanical structure provides individual prism/lense elements over each pixel. The prism/lense element is configured so that light from the LCD may be directed towards each eye of a viewer. The prism/lense elements have a piezoelectric material integrated on a beam supporting the prism/lense element which may be energized with control signals to alter the angle of the prism/lense element so that the light may be selectively directed towards each eye of the viewer. Each piezoelectric element (PZE) has a positive and negative voltage terminal. One of the voltage terminals is "addressed" with an X line and the other with a Y line creating a matrix selection of each PZE. The voltage level of the X line may be varied to add further control of the PZE. If an X voltage is present and the corresponding Y return line is selected, then a PZE will deflect the particular prism/lense element. By alternatively presenting an image frame for each of the viewer's eyes and correspondingly controlling the pixels, a 3D image is perceived by the viewer. Adjustment is provided so that the level of the X voltages may be controlled by a viewer to personally optimize the display. Algorithms may be employed to control when particular pixels are activated and by how much so that anomalies in the display may be controlled.